PRELIMINARY AMENDMENT TO THE CLAIMS

1. (Original) A solid support composition comprising:
   a) an acid forming cleavable linker; and
   b) a PNA dimer, comprising an N-terminal base labile protecting group, cleavably linked to the solid support through the cleavable linker, wherein the loading of the PNA dimer on the solid support is greater than or equal to 0.08 mmol per gram.

2. (Original) The composition of claim 1, wherein the solid support is a sterically hindered solid support.

3. (Original) The composition of claim 2, wherein the sterically hindered solid support is selected from the group consisting of: Trityl chloride resin (Trityl-Cl), 2-Chlorotrityl chloride resin, DHPP, MBHA, 4-methyltrityl chloride resin, 4-methoxytrityl chloride resin, Hydroxy-(2-chorophenyl)methyl-PS, Rink Acid Resin and NovaSyn TGT alcohol resin.

4. (Original) The composition of claim 1, wherein the solid support is selected from the group consisting of: PAL-PEG-PS™, NovaSyn TGA and Wang Resin.

5. (Original) The composition of claim 1 or 2, wherein the PNA dimer is linked to the cleavable linker by an ester bond.

6. (Original) The composition of claim 1 or 2, wherein the PNA dimer is formed from Fmoc(Bhoc) monomers.

7. (Original) The composition of claim 1 or 2, wherein the loading of the PNA dimer on the solid support is in the range from about 0.1 mmol per gram to about 1 mmol per gram.

8. (Original) The composition of claim 1 or 2, wherein the loading of the PNA dimer on the solid support is in the range from about 0.12 mmol per gram to about 0.35 mmol per gram.

9. (Original) The composition of claim 1 or 2 wherein the solid support is an array comprising two or more different support bound PNA dimers.

10. (Original) A library comprising at least two solid supports wherein said at least two solid supports each comprise:
    a) an acid forming cleavable linker; and
    b) a PNA dimer that: (i) is cleavably linked to the acid forming cleavable linker; and (ii) differs in nucleobase sequence from the PNA dimer that is linked to any of the other of the at least two solid supports of the library.

Claims 11-27 (Canceled)

28. (Original) A method for forming a support bound PNA dimer, said method comprising:
    a) coupling a first PNA monomer to a sterically hindered solid support comprising a sterically hindered acid forming cleavable linker wherein the PNA monomer comprises a N-terminal amine base labile protecting group;
    b) optionally washing the solid support to remove excess first PNA monomer;
    c) treating the solid support for a period of about 1 to about 2 minutes with a deprotection reagent that substantially removes the base labile N-terminal amine protecting group from the support bound first PNA monomer but that does not allow for more than 50 percent cyclization and elimination of the first PNA monomer from the support;
    d) washing the solid support to remove the deprotection reagent; and
    e) coupling a second PNA monomer to the N-terminal amine of the first PNA monomer as soon as is practical after performing steps (c) and (d).

Claims 29-40 (Canceled)

41. (Original) A method for forming a support bound PNA dimer, said method comprising:

a) coupling a first PNA monomer to solid support comprising an acid forming cleavable linker wherein the PNA monomer comprises an acid labile N-terminal protecting group;

b) optionally washing the solid support to remove excess first PNA monomer;

c) treating the solid support with a deprotection reagent under acidic conditions that deprotect the acid labile N-terminal protecting group;

d) washing the solid support to remove the deprotection reagent; and

e) coupling a second PNA monomer to the N-terminal amine of the first PNA monomer,

wherein the final loading of the PNA dimer on the solid support is greater than or equal to 0.08 mmol per gram.

Claims 42-51 (Canceled)

52. A PNA C-terminal acid oligomer comprising a C-terminal PNA subunit and a fluorescent label or quencher.

Claims 53-62 (Canceled)

63. A library of PNA C-terminal acid oligomers, each PNA oligomer of the library comprising:

a) a nucleobase sequence;

b) a C-terminal PNA subunit; and

c) a fluorescent label or quencher moiety;

wherein each PNA oligomer differs, either in label, nucleobase sequence, subunit length or polarity of nucleobase sequence, from each of the other PNA oligomers of the library.

Claims 64-74 (Canceled)